

REMARKS

The application contained claims 1, 3-4, 6-10, 12, 22-23, 26, 28-33, 35-36, and 39-40 prior to this amendment. The Examiner rejected claims 1, 3-4, 6-10, 12, 22-23, 26, 28-33, 35-36, and 39-40 under 35 U.S.C. 112, second paragraph. The Examiner rejected claims 1, 3-4, 6-10, 12, 22-23, 26, 28-33, 35-36, and 39-40 under 35 U.S.C. § 103(a) over von Stein (U.S. Patent No. 6,529,243), Hashimoto (U.S. Patent No. 4,768,085), Ogawa (U.S. Patent No. 7,142,233), and Roberts (U.S. Patent No. 5,541,654). The Examiner rejected claims 9 and 10 under 35 U.S.C. § 103(a) over von Stein, Hashimoto, Ogawa, Roberts, and Zhou (IEEE). The Examiner rejected claim 23 under 35 U.S.C. § 103(a) over von Stein, Hashimoto, Ogawa, Roberts, and Sano (IEEE).

Applicant cancels claims 1, 3-4, 6-10, 12, 22-23, 26, 28-33, 35-36, and 39-40, and adds new claims 41-70. Claims 41-70 remain in the application after entering this amendment. Applicant adds no new matter and requests reconsideration.

Interview Summary

Applicant thanks Examiner Henn for conducting an interview on July 18, 2011. During the interview, Applicant's attorney and Examiner Henn discussed the cited references and proposed claim amendments. No agreement was reached during the interview.

Claim Rejections under 35 U.S.C. § 112

The Examiner rejected claims 1, 3-4, 6-10, 12, 22-23, 26, 28-33, 35-36, and 39-40 under 35 U.S.C. 112, second paragraph. Applicant has canceled claims 1, 3-4, 6-10, 12, 22-23, 26, 28-33, 35-36, and 39-40, which obviates the Examiner's rejections.

Claim Rejections under 35 U.S.C. § 103

The Examiner rejected claims 1, 3-4, 6-10, 12, 22-23, 26, 28-33, 35-36, and 39-40 under 35 U.S.C. § 103(a) over the combination of von Stein, Hashimoto, Ogawa, and Roberts, alone or in further combination with Zhou or Sano. Applicant has canceled claims 1, 3-4, 6-10, 12, 22-23, 26, 28-33, 35-36, and 39-40, which obviates the Examiner's rejections.

New Claims

Applicant adds new claims 41-70, support for which is provided in the specification as originally-filed. None of the cited references teach or suggest the claim features in the newly added claims.

Claim 41 recites *an array controller configured to select subsets of the sensors for readout, wherein multiple sensors in a column of sensors are included in a plurality of the subsets of the sensors.*

The Examiner appears to allege Ogawa's photodetectors 301 disclose the recited sensors, and that Ogawa's 2x2 blocks of photodetectors 301 disclose the recited subsets of sensors. There is no disclosure in Ogawa, however, that "multiple sensors in a column of sensors are included in a plurality of the subsets of the sensors" as the claim recites. See, e.g. Ogawa, Figure 11; col. 6, lines 30-64, where Ogawa discloses presetting its sensor array into non-overlapping 2x2 blocks of photodetectors 301, for example, block A includes photodetectors Ra1, Ga2, Ga3, Ba4, for read operations.

The Examiner further appears to allege Hashimoto's image sensing cells disclose the recited sensors, and Hashimoto's lines of image sensing cells disclose the recited subsets of sensors. Hashimoto, however, does not teach or suggest that "multiple sensors in a column of sensors are included in a plurality of the subsets of the sensors" as the claim recites. See, e.g., Hashimoto, Figures 1 and 7; col.4, lines 20-47, where Hashimoto discloses reading image sensing cells in row-pairs to generate fields of even lines and odd lines for a video frame. Nothing in Stein or Roberts cures this deficiency. Since Stein, Hashimoto, Ogawa, and Roberts fail to disclose the recited claim features, claim 41 and its corresponding dependent claims are allowable over the combination of Stein, Hashimoto, Ogawa, and Roberts. Independent claims 49, 57, and 64 disclose claim features that are generally similar to those presented in claim 41, and thus claims 49, 57, and 64 and their corresponding dependent claims are allowable at least for similar reasons.

Claim 57 recites:

an array of sensors including a first group of sensors configured to sense light and a second group of sensors blocked from light exposure,

an array controller configured to select subsets of sensors from the first group of sensors for readout and to select at least one sensor in the second group of sensors for readout, wherein multiple sensors in a column of sensors are included in a plurality of the subsets of the sensors, and

a compensation system configured to reduce fixed pattern noise in light sensed the first group of sensors based on the readout from the at least one sensor in the second group of sensors.

None of the cited references teach or suggest “a second group of sensors blocked from light exposure,” much less “a compensation system configured to reduce fixed pattern noise in light sensed the first group of sensors based on the readout from the at least one sensor in the second group of sensors” as the claim recites. Since Stein, Hashimoto, Ogawa, and Roberts fail to disclose the recited claim features, claim 57 and its corresponding dependent claims are allowable over the combination of Stein, Hashimoto, Ogawa, and Roberts. Independent claim 64 discloses claim features that are generally similar to those presented in claim 57, and thus claim 64 and its corresponding dependent claims are allowable at least for similar reasons.

CONCLUSION

Applicant respectfully requests reconsideration and allowance of the claims. Applicant encourages the Examiner to call if a conference would further prosecution.

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Respectfully submitted,

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